Windows PowerShell

```
Windows PowerShell
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Try the new cross-platform PowerShell https://aka.ms/pscore6

PS C:\Users\Faizan> docker run hello-world
Unable to find image 'hello-world:latest' locally
latest: Pulling from library/hello-world
c1ec31eb5944: Pull complete
Digest: sha256:ac69084025c660510933cca701f615283cdbb3aa0963188770b54c31c8962493
Status: Downloaded newer image for hello-world:

Hello from Docker!
This message shows that your installation appea

To generate this message, Docker took the follo
1. The Docker client contacted the Docker daemo
2. The Docker daemon pulled the "hello-world" i
   (amd64)
3. The Docker daemon created a new container fr
   executable that produces the output you are
4. The Docker daemon streamed that output to th
   to your terminal.

To try something more ambitious, you can run an
 $ docker run -it ubuntu bash

Share images, automate workflows, and more with
 https://hub.docker.com/

For more examples and ideas, visit:
 https://docs.docker.com/get-started/

PS C:\Users\Faizan>
```

faizan@DESKTOP-S27V5UT: ~

```
://%2Fvar%2Frun%2Fdocker.sock/v1.24/containers/create": dial unix /var/run/docker.sock: connect: permission denied.
See 'docker run --help'.
faizan@DESKTOP-S27V5UT:~$ sudo docker run hello-world

Hello from Docker!
This message shows that your installation appears to be working correctly.

To generate this message, Docker took the following steps:
1. The Docker client contacted the Docker daemon.
2. The Docker daemon pulled the "hello-world" image from the Docker Hub.
   (amd64)
3. The Docker daemon created a new container from that image which runs the
   executable that produces the output you are currently reading.
4. The Docker daemon streamed that output to the Docker client, which sent it
   to your terminal.

To try something more ambitious, you can run an Ubuntu container with:
 $ docker run -it ubuntu bash

Share images, automate workflows, and more with a free Docker ID:
 https://hub.docker.com/

For more examples and ideas, visit:
 https://docs.docker.com/get-started/

faizan@DESKTOP-S27V5UT:~$
```

---

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faizan@DESKTOP-S27V5UT: ~

```
Welcome to Ubuntu 22.04.3 LTS (GNU/Linux 5.15.133.1-microsoft-standard-WSL2 x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:     https://landscape.canonical.com
 * Support:        https://ubuntu.com/advantage

This message is shown once a day. To disable it please create the
/home/faizan/.hushlogin file.
faizan@DESKTOP-S27V5UT:~$ docker pull alpine
Using default tag: latest
latest: Pulling from library/alpine
661ff4d9561e: Pull complete
Digest: sha256:51b67269f354137895d43f3b3d810bfacd3945438e94dc5ac55fdac340352f48
Status: Downloaded newer image for alpine:latest
docker.io/library/alpine:latest

What's Next?
  View a summary of image vulnerabilities and recommendations → docker scout quickview alpine
faizan@DESKTOP-S27V5UT:~$
```

https://github.com/docker/labs/blob/master/beginner/chapters/alpine.md

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```
faizan@DESKTOP-S27V5UT: ~

Welcome to Ubuntu 22.04.3 LTS (GNU/Linux 5.15.133.1-microsoft-standard-WSL2 x86_64)

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/home/faizan/.hushlogin file.
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Using default tag: latest
latest: Pulling from library/alpine
661ff4d9561e: Pull complete
Digest: sha256:51b67269f354137895d43f3b3d810bfacd3945438e94dc5ac55fdac340352f48
Status: Downloaded newer image for alpine:latest
docker.io/library/alpine:latest

What's Next?
  View a summary of image vulnerabilities and recommendations → docker scout quickview alpine
faizan@DESKTOP-S27V5UT:~$ docker images
REPOSITORY      TAG      IMAGE ID       CREATED        SIZE
alpine          latest   f8c20f8bbcb6   5 weeks ago    7.38MB
hello-world     latest   d2c94e258dcb   8 months ago   13.3kB
faizan@DESKTOP-S27V5UT:~$
```

1. The Docker client contacts the Docker daemon

```
faizan@DESKTOP-S27V5UT: ~

faizan@DESKTOP-S27V5UT:~$ docker run alpine ls -l
total 56
drwxr-xr-x    2 root     root          4096 Dec  7 09:43 bin
drwxr-xr-x    5 root     root           340 Jan 12 01:41 dev
drwxr-xr-x    1 root     root          4096 Jan 12 01:41 etc
drwxr-xr-x    2 root     root          4096 Dec  7 09:43 home
drwxr-xr-x    7 root     root          4096 Dec  7 09:43 lib
drwxr-xr-x    5 root     root          4096 Dec  7 09:43 media
drwxr-xr-x    2 root     root          4096 Dec  7 09:43 mnt
drwxr-xr-x    2 root     root          4096 Dec  7 09:43 opt
dr-xr-xr-x  270 root     root             0 Jan 12 01:41 proc
drwx------    2 root     root          4096 Dec  7 09:43 root
drwxr-xr-x    2 root     root          4096 Dec  7 09:43 run
drwxr-xr-x    2 root     root          4096 Dec  7 09:43 sbin
drwxr-xr-x    2 root     root          4096 Dec  7 09:43 srv
dr-xr-xr-x   11 root     root             0 Jan 12 01:41 sys
drwxrwxrwt    2 root     root          4096 Dec  7 09:43 tmp
drwxr-xr-x    7 root     root          4096 Dec  7 09:43 usr
drwxr-xr-x   12 root     root          4096 Dec  7 09:43 var
faizan@DESKTOP-S27V5UT:~$
```

faizan@DESKTOP-S27V5UT: ~

```
drwxr-xr-x   12 root      root      4096 Dec  7 09:43 var
faizan@DESKTOP-S27V5UT:~$ docker run alpine echo "hello from alpine"
hello from alpine
faizan@DESKTOP-S27V5UT:~$ docker run alpine /bin/sh
faizan@DESKTOP-S27V5UT:~$ docker run -it alpine /bin/sh
/ # ls -l
total 56
drwxr-xr-x    2 root      root      4096 Dec  7 09:43 bin
drwxr-xr-x    5 root      root       360 Jan 12 02:03 dev
drwxr-xr-x    1 root      root      4096 Jan 12 02:03 etc
drwxr-xr-x    2 root      root      4096 Dec  7 09:43 home
drwxr-xr-x    7 root      root      4096 Dec  7 09:43 lib
drwxr-xr-x    5 root      root      4096 Dec  7 09:43 media
drwxr-xr-x    2 root      root      4096 Dec  7 09:43 mnt
drwxr-xr-x    2 root      root      4096 Dec  7 09:43 opt
dr-xr-xr-x  269 root      root         0 Jan 12 02:03 proc
drwx------    1 root      root      4096 Jan 12 02:03 root
drwxr-xr-x    2 root      root      4096 Dec  7 09:43 run
drwxr-xr-x    2 root      root      4096 Dec  7 09:43 sbin
drwxr-xr-x    2 root      root      4096 Dec  7 09:43 srv
dr-xr-xr-x   11 root      root         0 Jan 12 02:03 sys
drwxrwxrwt    2 root      root      4096 Dec  7 09:43 tmp
drwxr-xr-x    7 root      root      4096 Dec  7 09:43 usr
drwxr-xr-x   12 root      root      4096 Dec  7 09:43 var
/ # uname -a
Linux b8f5d5827817 5.15.133.1-microsoft-standard-WSL2 #1 SMP Thu Oct  5 21:02:42 UTC 2023 x86_64 Linux
/ #
```

minutes ago. You're probably wondering if there is a way to run more than just one command in a container. Let's try that now:

---

faizan@DESKTOP-S27V5UT: ~

```
Linux b8f5d5827817 5.15.133.1-microsoft-standard-WSL2 #1 SMP Thu Oct  5 21:02:42 UTC 2023 x86_64 Linux
/ # exit
faizan@DESKTOP-S27V5UT:~$ docker ps
CONTAINER ID    IMAGE      COMMAND      CREATED      STATUS      PORTS      NAMES
faizan@DESKTOP-S27V5UT:~$
```

What you see above is a list of all containers that you ran. Notice that the STATUS column shows that these containers exited a few

```
Linux b8f5d5827817 5.15.133.1-microsoft-standard-WSL2 #1 SMP Thu Oct 5 21:02:42 UTC 2023 x86_64 Linux
/ # exit
faizan@DESKTOP-S27V5UT:~$ docker ps
CONTAINER ID   IMAGE    COMMAND    CREATED    STATUS    PORTS    NAMES
faizan@DESKTOP-S27V5UT:~$ docker ps -a
CONTAINER ID   IMAGE         COMMAND                CREATED          STATUS              PORTS    NAMES
b8f5d5827817   alpine        "/bin/sh"              11 minutes ago   Exited (0) 2 minutes ago      lucid_shami
r
552f53fdec44   alpine        "/bin/sh"              17 minutes ago   Exited (0) 17 minutes ago     festive_coh
en
1ccc315effea   alpine        "echo 'hello from al…" 18 minutes ago   Exited (0) 18 minutes ago     jolly_kilby
bbf8805dc067   alpine        "ls -l"                33 minutes ago   Exited (0) 33 minutes ago     keen_varaha
mihira
24c5f534e746   hello-world   "/hello"               44 hours ago     Exited (0) 44 hours ago       charming_ed
ison
7b8adcd43019   hello-world   "/hello"               44 hours ago     Exited (0) 44 hours ago       confident_p
erlman
faizan@DESKTOP-S27V5UT:~$
```

Running the `run` command with the `-it` flags attaches us to an interactive tty in the container. Now you can run as many

```
faizan@DESKTOP-S27V5UT:~$ sudo docker run -d dockersamples/static-site
[sudo] password for faizan:
sudo: docker: command not found
faizan@DESKTOP-S27V5UT:~$ docker run -d dockersamples/static-site

The command 'docker' could not be found in this WSL 2 distro.
We recommend to activate the WSL integration in Docker Desktop settings.

For details about using Docker Desktop with WSL 2, visit:

https://docs.docker.com/go/wsl2/

faizan@DESKTOP-S27V5UT:~$ sudo docker run -d dockersamples/static-site
sudo: docker: command not found
faizan@DESKTOP-S27V5UT:~$ docker run -d dockersamples/static-site
Unable to find image 'dockersamples/static-site:latest' locally
latest: Pulling from dockersamples/static-site
fdd5d7827f33: Pull complete
a3ed95caeb02: Pull complete
716f7a5f3082: Pull complete
7b10f03a0309: Pull complete
aff3ab7e9c39: Pull complete
Digest: sha256:daa686c61d7d239b7977e72157997489db49f316b9b9af3909d9f10fd28b2dec
Status: Downloaded newer image for dockersamples/static-site:latest
df3c7cb515222054457aadc797863003ef9604b8a9bf219df1ff3438e9d144dc
faizan@DESKTOP-S27V5UT:~$
```

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Terminal — faizan@DESKTOP-S27V5UT: ~

```
faizan@DESKTOP-S27V5UT:~$ sudo docker run -d dockersamples/static-site
sudo: docker: command not found
faizan@DESKTOP-S27V5UT:~$ docker run -d dockersamples/static-site
Unable to find image 'dockersamples/static-site:latest' locally
latest: Pulling from dockersamples/static-site
fdd5d7827f33: Pull complete
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716f7a5f3082: Pull complete
7b10f03a0309: Pull complete
aff3ab7e9c39: Pull complete
Digest: sha256:daa686c61d7d239b7977e72157997489db49f316b9b9af3909d9f10fd28b2dec
Status: Downloaded newer image for dockersamples/static-site:latest
df3c7cb515222054457aadc797863003ef9604b8a9bf219df1ff3438e9d144dc
faizan@DESKTOP-S27V5UT:~$ docker ps
CONTAINER ID   IMAGE                    COMMAND            CREATED        STATUS         PORTS              NAM
ES
df3c7cb51522   dockersamples/static-site   "/bin/sh -c 'cd /usr…"   4 minutes ago   Up 4 minutes   80/tcp, 443/tcp   luc
id_bardeen
faizan@DESKTOP-S27V5UT:~$
```

Note: A cool feature is that you do not need to specify the entire CONTAINER_ID. You can just specify a few starting characters

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Terminal — faizan@DESKTOP-S27V5UT: ~

```
faizan@DESKTOP-S27V5UT:~$ sudo docker run -d dockersamples/static-site
sudo: docker: command not found
faizan@DESKTOP-S27V5UT:~$ docker run -d dockersamples/static-site
Unable to find image 'dockersamples/static-site:latest' locally
latest: Pulling from dockersamples/static-site
fdd5d7827f33: Pull complete
a3ed95caeb02: Pull complete
716f7a5f3082: Pull complete
7b10f03a0309: Pull complete
aff3ab7e9c39: Pull complete
Digest: sha256:daa686c61d7d239b7977e72157997489db49f316b9b9af3909d9f10fd28b2dec
Status: Downloaded newer image for dockersamples/static-site:latest
df3c7cb515222054457aadc797863003ef9604b8a9bf219df1ff3438e9d144dc
faizan@DESKTOP-S27V5UT:~$ docker ps
CONTAINER ID   IMAGE                    COMMAND            CREATED        STATUS         PORTS              NAM
ES
df3c7cb51522   dockersamples/static-site   "/bin/sh -c 'cd /usr…"   4 minutes ago   Up 4 minutes   80/tcp, 443/tcp   luc
id_bardeen
faizan@DESKTOP-S27V5UT:~$ docker stop df3
df3
faizan@DESKTOP-S27V5UT:~$
```

- -d will create a container with the process detached from our terminal
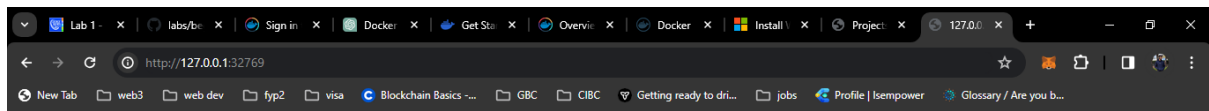
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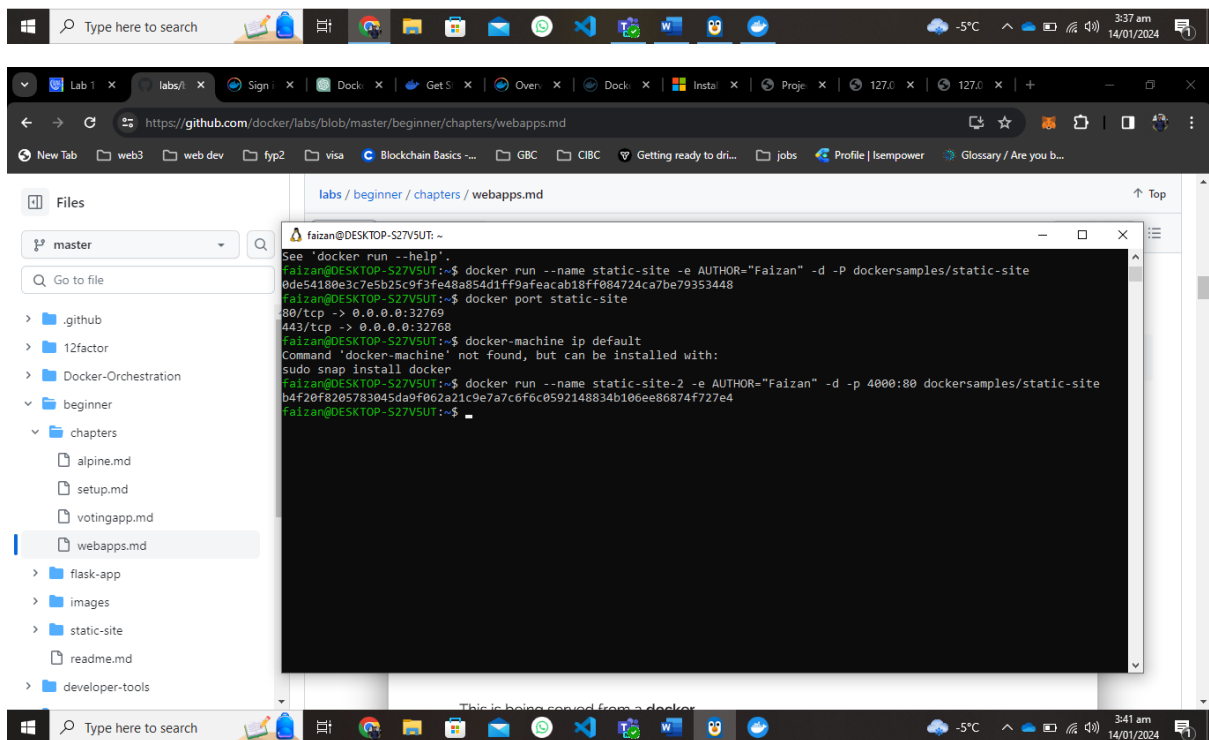 - readme.md
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Terminal (first window) — faizan@DESKTOP-S27V5UT: ~

```
faizan@DESKTOP-S27V5UT:~$ docker run -d dockersamples/static-site
Unable to find image 'dockersamples/static-site:latest' locally
latest: Pulling from dockersamples/static-site
fdd5d7827f33: Pull complete
a3ed95caeb02: Pull complete
716f7a5f3082: Pull complete
7b10f03a0309: Pull complete
aff3ab7e9c39: Pull complete
Digest: sha256:daa686c61d7d239b7977e72157997489db49f316b9b9af3909d9f10fd28b2dec
Status: Downloaded newer image for dockersamples/static-site:latest
df3c7cb515222054457aadc797863003ef9604b8a9bf219df1ff3438e9d144dc
faizan@DESKTOP-S27V5UT:~$ docker ps
CONTAINER ID   IMAGE                        COMMAND            CREATED        STATUS         PORTS               NAM
ES
df3c7cb51522   dockersamples/static-site    "/bin/sh -c 'cd /usr…"   4 minutes ago  Up 4 minutes   80/tcp, 443/tcp     luc
id_bardeen
faizan@DESKTOP-S27V5UT:~$ docker stop df3
df3
faizan@DESKTOP-S27V5UT:~$ docker rm df3
df3
faizan@DESKTOP-S27V5UT:~$
```

In the above command:

- -d will create a container with the process detached from our terminal

---

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Terminal (second window) — faizan@DESKTOP-S27V5UT: ~

```
Create and run a new container from an image
faizan@DESKTOP-S27V5UT:~$ docker run --name static-site -e AUTHOR="Faizan" -d -P dockersaples/static-site
Unable to find image 'dockersaples/static-site:latest' locally
docker: Error response from daemon: pull access denied for dockersaples/static-site, repository does not exist or may re
quire 'docker login': denied: requested access to the resource is denied.
See 'docker run --help'.
faizan@DESKTOP-S27V5UT:~$ docker run --name static-site -e AUTHOR="Faizan" -d -P dockersamples/static-site
0de54180e3c7e5b25c9f3fe48a854d1ff9afeacab18ff084724ca7be79353448
faizan@DESKTOP-S27V5UT:~$ docker port static-site
80/tcp -> 0.0.0.0:32769
443/tcp -> 0.0.0.0:32768
faizan@DESKTOP-S27V5UT:~$
```

```
See 'docker run --help'.
faizan@DESKTOP-S27V5UT:~$ docker run --name static-site -e AUTHOR="Faizan" -d -P dockersamples/static-site
0de54180e3c7e5b25c9f3fe48a854d1ff9afeacab18ff084724ca7be79353448
faizan@DESKTOP-S27V5UT:~$ docker port static-site
80/tcp -> 0.0.0.0:32769
443/tcp -> 0.0.0.0:32768
faizan@DESKTOP-S27V5UT:~$ docker-machine ip default
Command 'docker-machine' not found, but can be installed with:
sudo snap install docker
faizan@DESKTOP-S27V5UT:~$ docker run --name static-site-2 -e AUTHOR="Faizan" -d -p 4000:80 dockersamples/static-site
b4f20f8205783045da9f062a21c9e7a7c6f6c0592148834b106ee86874f727e4
faizan@DESKTOP-S27V5UT:~$
```

https://github.com/docker/labs/blob/master/beginner/chapters/webapps.md

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  > images
  > static-site
      readme.md
> developer-tools

```
faizan@DESKTOP-S27V5UT: ~
b4f20f8205783045da9f062a21c9e7a7c6f6c0592148834b106ee86874f727e4
faizan@DESKTOP-S27V5UT:~$ docker stop static-site
static-site
faizan@DESKTOP-S27V5UT:~$ docker rm static-site
static-site
faizan@DESKTOP-S27V5UT:~$ docker rm -f static-site-2
static-site-2
faizan@DESKTOP-S27V5UT:~$ docker ps
CONTAINER ID   IMAGE     COMMAND   CREATED   STATUS    PORTS     NAMES
faizan@DESKTOP-S27V5UT:~$
```

---

https://github.com/docker/labs/blob/master/beginner/chapters/webapps.md

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faizan@DESKTOP-S27V5UT: ~
faizan@DESKTOP-S27V5UT:~$ docker images
REPOSITORY                TAG      IMAGE ID       CREATED        SIZE
alpine                    latest   f8c20f8bbcb6   5 weeks ago    7.38MB
hello-world               latest   d2c94e258dcb   8 months ago   13.3kB
dockersamples/static-site latest   f589ccde7957   7 years ago    191MB
faizan@DESKTOP-S27V5UT:~$
```

Preview   Code   Blame   498 lines (358 loc) · 24.7 KB

Raw

```
faizan@DESKTOP-S27V5UT:~$ docker pull ubuntu:12.04
12.04: Pulling from library/ubuntu
d8868e50ac4c: Pull complete
83251ac64627: Pull complete
589bba2f1b36: Pull complete
d62ecaceda39: Pull complete
6d93b41cfc6b: Pull complete
Digest: sha256:18305429afa14ea462f810146ba44d4363ae76e4c8dfc38288cf73aa07485005
Status: Downloaded newer image for ubuntu:12.04
docker.io/library/ubuntu:12.04

What's Next?
  View a summary of image vulnerabilities and recommendations → docker scout quickview ubuntu:12.04
faizan@DESKTOP-S27V5UT:~$ docker pull ubuntu
Using default tag: latest
latest: Pulling from library/ubuntu
a48641193673: Pull complete
Digest: sha256:6042500cf4b44023ea1894effe7890666b0c5c7871ed83a97c36c76ae560bb9b
Status: Downloaded newer image for ubuntu:latest
docker.io/library/ubuntu:latest

What's Next?
  View a summary of image vulnerabilities and recommendations → docker scout quickview ubuntu
faizan@DESKTOP-S27V5UT:~$
```